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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/887,528 | 06/25/2001 | Michael A. Ekhaus | 7744.0061 | 5737 |
| 26111 | 7590 | 01/27/2006 | | |
| STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005 | | | EXAMINER TARAE, CATHERINE MICHELLE | |
| | | | ART UNIT 3623 | PAPER NUMBER |
| DATE MAILED: 01/27/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/887,528

Applicant(s)

EKHAUS ET AL.

Examiner

C. Michelle Tarae

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19,27 and 35 is/are pending in the application.
- 4a) Of the above claim(s) 9,10,19,27 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ✓ 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ✓ 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/6/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The following is a Non-Final Office Action in response to the communication received on October 31, 2005. Claims 20-26 and 28-34 have been canceled. Claims 19 and 27 have been amended. Claims 1-19, 27 and 35 are now pending in this application.

Election/Restrictions

2. In the response to the Election/Restriction Requirement, Applicant has elected generic claims 1-8 and Species I, which are claims 11-18 without traverse. Even as amended, claims 19 and 27 are still restricted under their original species groupings; therefore, claims 19 and 27 are considered drawn to a non-elected invention.

Claims 1-8 and 11-18 are rejected below. Claims 9, 10, 19, 27 and 35 are withdrawn from further consideration.

Information Disclosure Statement

3. The examiner has reviewed the patents and publications supplied in the Information Disclosure Statements (IDS) provided on January 6, 2006.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-8 and 11-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Hosken (U.S. 6,438,579).

As per claim 1, Hosken discloses a method of preparing a recommendation to be accessed by a user comprising the steps of:

providing a sparse ratings matrix (col. 11, line 65-col. 12, line 12; Figure 4 and 5;

The system uses a sparse ratings matrix to generate recommendations to users.);

forming a plurality of data structures representing said sparse ratings matrix (col. 11, line 65-col. 12, line 12; Figure 4 and 5; The cells, or data structures, of the matrix store data representing user attributes.);

forming a runtime recommendation model from said plurality of data structures (col. 12, lines 38-66; The recommendation model is generated by traversing through the data sets of the sparse ratings matrix.);

determining a recommendation from said runtime recommendation model in response to a request from a user (col. 5, lines 20-25; col. 12, lines 13-21; The system generates a recommendation based on a request from a user.); and

providing said recommendation to said user (col. 12, lines 13-21; The system generates a recommendation based on a request from a user.).

As per claim 2, Hosken discloses the method of claim 1, further comprising calculating a unary multiplicity voting recommendation from said runtime

recommendation model (col. 11, lines 26-40; Confidence levels are associated with the ratings, where the confidence levels range from 0 to 9, therefore ranging from no information to a positive indication, as defined in Applicant's specification.).

As per claim 3, Hosken discloses the method of claim 1, further comprising calculating a non-unary multiplicity voting recommendation from said runtime recommendation model (col. 11, lines 20-25; The weighting and ratings include binary relations that range from 1 to -1.).

As per claim 4, Hosken discloses the method of claim 2, wherein said set step of calculating a unary multiplicity voting recommendation comprises calculating an anonymous recommendation (col. 9, line 66-col. 10, line 67; User recommendations may be generated based on user behavior analysis, where the user does not necessarily provide any identification, rather, the user's behavior is monitored and used to identify the user's interests. Hosken differentiates between "anonymous" recommendations (i.e., recommendations generated from implicit behavior of the user) versus explicit recommendations generated from information or behavior directly provided by the user.).

As per claim 5, Hosken discloses the method of claim 2, wherein said set step of calculating a unary multiplicity voting recommendation comprises calculating a personalized recommendation (col. 2, lines 63-67; The system provides recommendations that are personalized to a user based on the user's implicit and explicit preferences.).

As per claim 6, Hosken discloses the method of claim 3, wherein said set step of calculating a non-unary multiplicity voting recommendation comprises calculating an anonymous recommendation (col. 9, line 66-col. 10, line 67; User recommendations may be generated based on user behavior analysis, where the user does not necessarily provide any identification, rather, the user's behavior is monitored and used to identify the user's interests. Hosken differentiates between "anonymous" recommendations (i.e., recommendations generated from implicit behavior of the user) versus explicit recommendations generated from information or behavior directly provided by the user.).

As per claim 7, Hosken discloses the method of claim 3, wherein said set step of calculating a non-unary multiplicity voting recommendation comprises calculating a personalized recommendation (col. 2, lines 63-67; The system provides recommendations that are personalized to a user based on the user's implicit and explicit preferences.).

As per claim 8, Hosken discloses the method of claim 1, wherein said set step of forming a runtime recommendation model from said plurality of data structures comprises:

mapping said sparse ratings matrix into a plurality of sub-space ratings matrix (col. 8, line 66-col. 9, line 38; The system uses weighting factors to map items in the sparse ratings matrix that share characterizing attributes.);

wherein said mapping step comprises multiplying said ratings matrix by a mappings matrix between said ratings matrix and a plurality of categories (col. 15, lines

64-67; The weighting factors are multiplied with the rating.); and wherein each of said sub-space ratings matrices corresponds to one of said plurality of categories (col. 9, lines 2-22; Hosken provides a table that shows an example of the mapping, where the data corresponds to different music categories.).

As per claim 11, Hosken discloses a method of preparing a recommendation to be accessed by a user comprising the steps of:

providing a sparse ratings matrix (col. 11, line 65-col. 12, line 12; Figure 4 and 5; The system uses a sparse ratings matrix to generate recommendations to users.);

providing an update ratings data structure (col. 10, lines 28-30; col. 11, lines 44-49; The user is allowed to continually update and refine their profile.);

forming a plurality of data structures representing said sparse ratings matrix (col. 11, line 65-col. 12, line 12; Figure 4 and 5; The cells, or data structures, of the matrix store data representing user attributes.);

forming a runtime recommendation model from said plurality of data structures and said update ratings data structure (col. 12, lines 38-66; col. 15, lines 46-54; col. 18, lines 59-67; The recommendation model is generated by traversing through the data sets of the sparse ratings matrix, which includes any updated ratings or weights.);

determining a recommendation from said runtime recommendation model in response to a request from a user (col. 5, lines 20-25; col. 12, lines 13-21; The system generates a recommendation based on a request from a user.); and

providing said recommendation to said user (col. 12, lines 13-21; The system generates a recommendation based on a request from a user.).

Claims 12-18 recite substantially similar subject matter as claims 1-8 and 11 rejected above. Therefore, claims 12-18 are rejected on the same basis as claims 1-8 and 11 above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kolawa et al. (U.S. 6,370,513) discusses a system for recommendation of items;
- Robinson (U.S. 5,790,426) discusses a collaborative filtering system; and
- Goldberg (U.S. 6,606,624) discusses a method for providing a recommendation to an individual.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Michelle Tarae (formerly, C. Michelle Colon) whose telephone number is 571-272-6727. The examiner can normally be reached Monday – Friday from 8:30am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached at 571-272-6729.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "C. Michelle Tarae". The signature is fluid and cursive, with a large initial "C" and a stylized "M".

C. Michelle Tarae
Patent Examiner
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January 22, 2006